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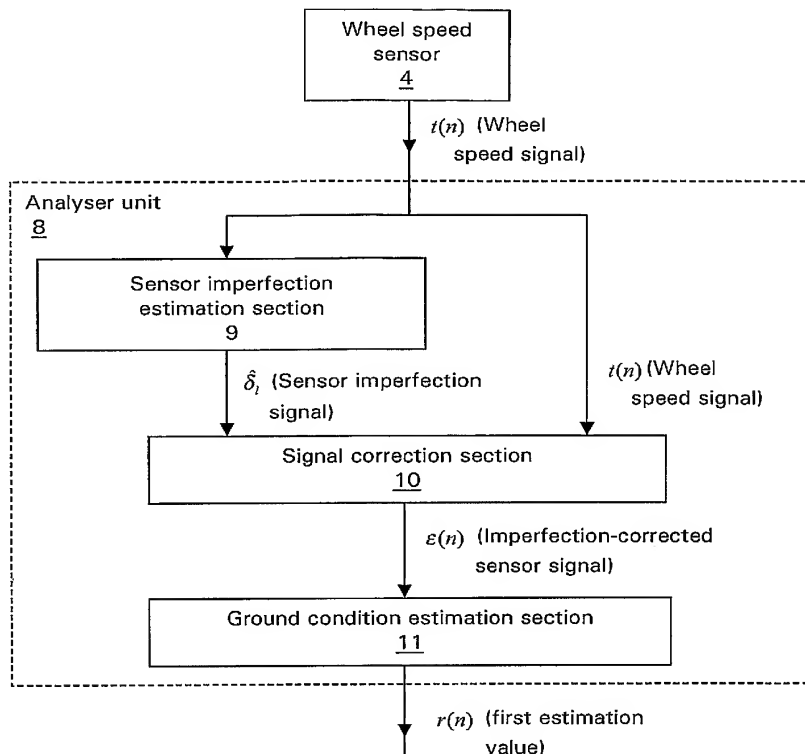
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(54) Title: ESTIMATION OF THE ROAD CONDITION UNDER A VEHICLE



(57) Abstract: A system for estimating the ground condition under a driving vehicle, comprising: a wheel speed sensor (4) for sensing a wheel speed signal ( $t(n)$ ),  $\omega(n)$ ) which is indicative of the wheel speed of a vehicle's wheel driving over the ground (2,3) and a first analyser unit (8) coupled to said wheel speed sensor (4). The first analyser unit comprises a sensor imperfection estimation section (9) which is designed to estimate a sensor imperfection signal, formula (I), from the wheel speed signal ( $t(n)$ ) which is indicative of the sensor imperfection of the wheel speed sensor (4); a signal correction section (10) which is designed to determine an imperfection-corrected sensor signal ( $\epsilon(n)$ ) from the wheel speed signal ( $t(n)$ ) and the sensor imperfection signal, formula (I); and a ground condition estimation section (11) which is designed to estimate a first estimation value ( $r(n)$ ,  $\alpha(n)$ ) indicative of the ground condition from the imperfection-corrected sensor signal ( $\epsilon(n)$ ).

( $\hat{\delta}_i$ )<sub>(i)</sub>

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